Amendments to the Claims

Please amend the claims to read as follows.

CLAIMS:

1-35. (Cancelled)

36. (Currently Amended): A method of processing a time-sequence of separate image data sets each set comprising a plurality of image data items which each represent the location of an image pixel of the image subject according to a spatially fixed reference frame within which the subject is located, the method including the steps of:

(a) selecting a plurality of separate image pixel locations within said reference frame, comprising selecting a target image pixel location within said reference frame and subsequently selecting all image pixel locations which are intersected by a predefined first locus intersecting said target image pixel location;

(b) selecting from each of a plurality of said separate image data sets those image data items which represent image pixels located at said plurality of separate image pixel locations;

(c) generating a time-domain image according to said selected image data items wherein those image pixels of the time-domain image sharing a common image pixel location within said reference frame are arranged in said time-sequence in a line containing only those pixels.

(d) selecting a target one of said plurality of separate image data sets and selecting therefrom those image data items which represent image pixels located in a common first plane containing said first locus and generating a first spatial-domain image according to the data items so selected; and

(e) generating a composite image containing said first spatial-domain image and said time-domain image aligned such that those pixels of the first spatial-domain image and of the time-domain image which share a common image pixel location within said reference frame are arranged in-line.

37. (Previously Presented): A method according to Claim 36 wherein each image pixel is an image voxel such that each image data item represents the location of an image voxel of the image subject according to a spatially fixed three-dimensional reference frame wherein each image data set contains image data items representing image voxel locations spanning all three dimensions of said reference frame.

38. (Cancelled)

39. (Currently Amended): A method according to Claim ~~38~~ 36 wherein said predefined first locus is a line extending through said reference frame.

40. (Previously Presented): A method according to Claim 39 wherein said line extends through only one dimension of said reference frame and intersects all pixel locations within a column or a row of pixel locations within the reference frame.

41. (Currently Amended): A method according to any of preceding claims ~~38~~39 to 40 wherein said time-domain image is generated such that those image pixels of the time-domain image which are represented by image data items selected from a common image data set are arranged in a line containing only those pixels.

42. (Previously Presented): A method according to Claim 41 in which said time-domain image comprises a matrix of pixels arranged to define columns and rows, wherein each column contains only those image pixels sharing a common pixel location within said reference frame, and each row contains only those image pixels selected from a common image data set or vice

versa.

43. (Cancelled)

44. (Currently Amended): A method according to ~~Claim 43~~ any one of preceeding claims 39-40 in which said composite image contains a second said time-domain image generated by selecting at step (a) said target image pixel location and image pixel locations which are intersected by a predefined second locus which intersects said first locus at said target image pixel location and is substantially coplanar with said first locus, wherein said first spatial-domain image and said second time-domain image are aligned such that those pixels of the first spatial-domain image and of the second time-domain image which share a common image pixel location within said reference frame are arranged in-line.

45. (Previously Presented): A method according to Claim 44 wherein said first predefined locus is a line and said second predefined locus is a line substantially perpendicular to said first predefined locus.

46. (Currently Amended): A method according to ~~claim 43~~ any of preceding claims 39-40 including:
selecting from said target one of said plurality of separate image data sets those data items which represent image pixels located in a common second plane being non-coplanar with said first plane and containing said first locus; generating a second spatial domain image according to the data items so selected; and, generating said composite image so as to contain said second spatial-domain image aligned such that those pixels of the second spatial-domain image and of said time-domain image which share a common pixel location within said reference frame are arranged in-line.

47. (Previously Presented): A method according to claim 44 including:
selecting from said target one of said plurality of separate image data sets those data items which represent image pixels located in a common third plane being non-coplanar with said

first plane and containing said second locus; generating a third spatial domain image according to the data items so selected; and, generating said composite image so as to contain said third spatial-domain image aligned such that those pixels of the third spatial-domain image and of said second time-domain image which share a common pixel location within said reference frame are arranged in-line.

48. (Previously Presented): A method according to Claim 47 in which said composite image contains a third time-domain image generated by selecting at step (a) said target image pixel location and image pixel locations which are intersected by a predefined third locus which intersects said first locus and said second locus at said target image pixel location and is contained within one of said second plane and said third plane, wherein said third time-domain image and one of said second and said third spatial-domain images respectively are aligned such that those pixels of the third time-domain image and those pixels of said one of said second and said third spatial-domain images which share a common image pixel location within said reference frame are arranged in-line.

49. (Previously Presented): A method according to claim 47 wherein said first, second and third planes are all mutually substantially perpendicular.

50. (Currently Amended): Apparatus for processing a time-sequence of separate image data sets each set comprising a plurality of image data items which each represent the location of an image pixel of the image subject according to a spatially fixed reference frame within which the subject is located, the method including the steps of:

(a) first selection means selecting a plurality of separate image pixel locations within said reference frame, wherein the first selection means is arranged to select a target image pixel location within said reference frame, and includes locus means for defining a first locus intersecting said target image pixel location, wherein the first selection means is arranged to select all image pixel locations which are intersected by said first locus;

(b) second selection means for selecting from each of a plurality of said separate image data sets those image data items which represent image pixels located at said plurality of

separate image pixel locations, wherein said second selection means is arranged to select from a target one of said plurality of separate image data sets those image data items which represent image pixels located in a common first plane containing said first locus;

(c) image generating means for generating a time-domain image according to said selected image data items wherein those image pixels of the time-domain image sharing a common image pixel location within said reference frame are arranged in said time-sequence in a line containing only those pixels, wherein the image generating means is arranged to generate a first spatial-domain image according to the data items so selected and, to generate a composite image containing said first spatial-domain image and said time-domain image aligned such that those pixels of the first spatial-domain image and of the time-domain image which share a common image pixel location within said reference frame are arranged in-line.

51. (Previously Presented): Apparatus according to Claim 50 wherein each image pixel is an image voxel such that each image data item represent the location of an image voxel of the image subject according to a spatially fixed three-dimensional reference frame wherein each image data set contains image data items representing image voxel locations spanning all three dimensions of said reference frame.

52. (Cancelled):

53. (Currently Amended): Apparatus according to Claim ~~52~~50 wherein said predefined first locus is a line extending through said reference frame.

54. (Previously Presented): Apparatus according to Claim 53 wherein said line extends through only one dimension of said reference frame and intersects all pixel locations within a column or a row of pixel locations within the reference frame.

55. (Currently Amended): Apparatus according to any of preceding claims ~~52~~53 to 54 wherein said image generating means is arranged to generate said time-domain image such that those image pixels of the time-domain image which are represented by image data items

selected from a common image data set are arranged in a line containing only those pixels.

56. (Previously Presented): Apparatus according to Claim 55 in which said image generating means is arranged to generate said time-domain image comprising a matrix of pixels arranged to define columns and rows, wherein each column contains only those image pixels sharing a common pixel location within said reference frame, and each row contains only those image pixels selected from a common image data set, or vice versa.

57. (Cancelled):

58. (Currently Amended): Apparatus according to ~~Claim 57~~ any of preceding claims 53 to 54 wherein: said locus means is arranged to define a second locus which intersects said first locus at said target image pixel location and is substantially coplanar with said first locus; said second selection means is arranged to select all image data items the pixel locations of which are intersected by said second locus; said image generation means is arranged to generate a second time-domain image according to image data items so selected and to generate a composite image which contains a second time-domain image in which said first spatial-domain image and said second time-domain image are aligned such that those pixels of the first spatial-domain image and of the second time-domain image which share a common image pixel location within said reference frame are arranged in-line.

59. (Previously Presented): Apparatus according to Claim 58 wherein said Locus means is arranged to define said first locus as a line and said second locus is a line substantially perpendicular to said first locus.

60. (Currently Amended): Apparatus according to ~~claim57~~ any of preceding claims 53 to 54 wherein: said second selection means is arranged to select from said target one of said plurality of separate image data sets those data items which represent image pixels located in a common second plane being non-coplanar with said first plane and containing said first locus; said image generating means is arranged to generate a second spatial-domain image according

to the data items so selected, and to generate said composite image so as to contain said second spatial-domain image aligned such that those pixels of the second spatial-domain image and of said time-domain image which share a common pixel location within said reference frame are arranged in-line.

61. (Previously Presented): Apparatus according to claim 58 wherein:
said second selection means is arranged to select from said target one of said plurality of separate image data sets those data items which represent image pixels located in a common third plane being non-coplanar with said first plane and containing said second locus; and said image generating means is arranged to generate a third spatial domain image according to the data items so selected, and to generate said composite image so as to contain said third spatial-domain image aligned such that those pixels of the third spatial-domain image and of said second time-domain image which share a common pixel location within said reference frame are arranged in-line.

62. (Previously Presented): Apparatus according to Claim 61 wherein: said locus means is arranged to define a third locus which intersects said first locus and said second locus at said target image pixel location and is contained within one of said second plane and said third planes; said second selection means is arranged to select all image data items the pixel locations of which are intersected by said third locus; said image generation means is arranged to generate a third time-domain image according to image data items so selected and to generate a composite image
which contains said third time-domain image, wherein said third time-domain image and one of said second and said third spatial-domain images respectively are aligned such that those pixels of the third time-domain image and those pixels of said one of said second and said third spatial-domain images which share a common image pixel location within said reference frame are arranged in-line.

63. (Previously Presented): Apparatus according to claim 61 wherein said second selection means is arranged to select said first, second and third planes to be mutually

substantially perpendicular.

64. (Cancelled)

65. (Currently Amended): ~~A computer readable storage device comprising a computer program computer program for performing~~ A computer program product, comprising a computer usable medium having a computer readable program code embodied therein, said computer readable program code adapted to be executed to implement the method according to claim 36.